

***National Type Evaluation Program***  
***Certificate of Conformance***  
***for Weighing and Measuring Devices***

**For:**

Livestock Scale Weighing Element  
Mechanical Lever System  
Model: LS Series  
 $n_{\max}$ : 600 to 8000 (See Below);  $e_{\min}$ : 5 lb  
Capacity: 3000 lb to 40 000 lb (See Below)  
Platform: 8' x 3' to 30' x 14' (See Below)  
CLC: 5 ton to 20 ton (See Below)  
Accuracy Class: III/III L

**Submitted by:**

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**Standard Features and Options**

Model Number	Deck Size (ft)	Nominal Capacity (tons)	$n_{\max}$	CLC (tons)	Number of Sections
31	8 x 3	1-1/2	600	*	*
LS51208	12 x 8	5	2000	5	2
LS51408	14 x 8	5	2000	5	2
LS51608	16 x 9	5	2000	5	2
LS1016	16 x 9	10	4000	5	2
LS1018	18 x 9	10	4000	5	2
LS1022	22 x 9	10	4000	5	2
1030 S	30 x 14	10	4000	5	2
1530 S	30 x 14	20	8000	20	2
2026 S	26 x 14	20	8000	20	2

\* Single animal scale

See Page 2 for Scale descriptions

Temperature Range: -10 °C to 40 ° (14 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: December 15, 1997

Gilbert M. Ugiansky, Ph.D.  
Chief, Office of Weights and Measures  
Issue Date: March 25, 1998

**Note:** The National Institute of Standards and Technology does not "approve," "recommend," or "endorse" any proprietary product or material, either as a single item or as a class or group. Results shall not be used in advertising or sales promotion to indicate explicit or implicit endorsement of the product or the Institute. (See NTEP Policy and Procedures.)

**Cardinal Scale Mfg. Co.  
Livestock Scale Weighing Element  
Model: LS Series**

**Application:** For weighing single or multiple head of livestock on the hoof.

**Identification:** The identification is located on the transverse lever.

**Device Description:** The weighing element is a mechanical lever system with hardened and ground pivots and bearings. The connection between the levers and the load receiving element is a double-link suspension system.

The load receiving element is a fabricated steel weighbridge. A wood or concrete deck completes this element.

The indicating element can be a mechanical weighbeam or a mechanical dial of an approved and compatible type. The indicating element is attached to the weighing element by means of a steelyard and draft-rod assembly.

A load cell can be added to the steelyard or draft-rod assembly to provide both a mechanical and electronic indicating element. The load cell and electronic indicating element must be of approved and compatible types.

**Test Conditions:** This Certificate supersedes Certificate of Conformance Number 88-017PN and is issued without additional testing to upgrade the Certificate from a status of provisional to full. NTEP policy permits a pre-NTEP Certificate of Conformance to be upgraded from provisional to full provided no unfavorable comments are received during the comment period. Since no unfavorable comments were received on this device, this Certificate is issued as a full NTEP Certificate of Conformance. CLCs were added based on NTEP policy which permits declaring a CLC up to 100% of the section capacity without additional testing. The test conditions for Certificate of Conformance Number 88-017PN are listed below for reference.

**Certificate of Conformance Number 88-017PN:** These scales have received type approval by individual states prior to the establishment of the National Type Evaluation Program. These scales have been in commercial use for many years. Since these devices use mechanical lever systems, they are believed to be unaffected by the influence factors specified under T.N.8. of the Scales Code of NIST (formerly NBS) Handbook 44. The NTEP policy and procedures permit NTEP to issue Certificates of Conformance based upon the approvals granted by pre-NTEP jurisdictions. The Certificate is issued on this basis without formal NTEP testing.

**Pre-NTEP Type Approvals:** CT 1967; IL 1959; NY 1961; NC 1958; PA 1959; CA 1974

**Information Reviewed By:** H. Oppermann (NIST) 88-017PN; Lynn Sebring (NIST) 88-017